Remarks

Reconsideration of this application is respectfully requested.

Claims 1-5 are pending in the application. Upon entry of this Amendment, claims 1-4 will be amended, claim 5 will be cancelled, and new claims 8-11 will be added.

In the outstanding Office Action of January 8, 2008, the Examiner rejected claims 1-5 under 35 U.S.C. §112, second paragraph, as being indefinite, asserting that the claims fail to conform to U.S. practice, are "replete with limitations having sufficient antecedent basis", and fail to make clear whether a combination of trunnion assembly and gun or a trunnion assembly for use with a gun is being claimed. Claims 1-4 have now been amended to conform them to U.S. claim practice and to eliminate limitations without antecedent bases. Claim 5, which recited "a gun provided with a trunnion assembly", has been cancelled. Remaining independent claim 1 recites "a trunnion assembly for a gun", while remaining dependent claims 2-4 and 8 -11 further describe the trunnion assembly described in claim 1. As such, the asserted indefiniteness of the subject matter being claimed in the present application should now be clarified. In view of the foregoing, the Examiner's rejection of claims 1-4 under §112, second paragraph, should now be withdrawn.

In the outstanding Office Action, the Examiner rejected claims 1, 4 and 5 under 35 U.S.C. §102(b) as being anticipated by Dabrasky (USP No. 1,742,436). The Examiner's rejection of claims 1and 4 is respectfully traversed. The Examiner's rejection of claim 5 is moot in view of the cancellation.

For a claim to be anticipated by a reference, every element of the claim must be disclosed in a reference. Here, claims 1 and 4 are not anticipated by Dabrasky because

Dabrasky does not disclose every element recited in independent claim 1 or dependent claim 4.

Dabrasky discloses a trunnion bearing anti-friction mechanism which can be adjusted to remove any clearance or looseness that may develop, and thereby permit accuracy in pointing as well as rapidity and facility of operation of a gun capable of delivering rapid fire against swiftly moving targets, such as aircraft. Dabrasky, col. 1, lns. 7-19. Thus, the purpose of Dabrasky's trunnion bearing anti-friction mechanism is not to re-align the longitudinal axis of the trunnion shaft with that of the bore when the shaft is biased in a direction transverse the longitudinal axes by the impetus caused by the rearward movement of the gun when it is fired.

Each of Dabrasky's trunnions 7 is embraced by a self-aligning roller bearing assembly 9 of standard design having an adaptor 10 for fitting the bearing to the trunnion 7. A nut 11 threaded on the adaptor holds the inner race 12 in a place against a shoulder 13 of the trunnion, while a nut 14 threaded on the trunnion provides for adjustably retaining the adaptor 10 in position. The outer race 15 on the left trunnion is secured to the top carriage by means of a cap 16, while on the right trunnion a lateral clearance indicated at 17 and 18 is maintained between the outer race 19 and its support for the purpose of allowing for expansion and contraction of a cradle. Dabrasky, col. 1, ln. 42 to col. 2, ln. 56.

Thus, Dabrasky does not describe the re-aligning means recited in claim1 that includes a ball bearing assembly having at least one cam ring disposed between a resiliently compressible O-ring and a ball bearing. Dabrasky also does not disclose a bearing assembly including a toroidal-type roller bearing assembly, as recited in claim 4.

As such, Dabrasky does not anticipate the trunnion assembly described in claims 1 and 4 of the present application.

In the outstanding Office Action, the Examiner also rejected claims 1-3 under 35 U.S.C. §102(b) as being anticipated by Gotman (USP 4,699,528). The Examiner's rejection of claims 1-3 is also respectfully traversed.

Gotman does not anticipate the present invention since Gotman does not disclose a trunnion assembly which re-aligns the longitudinal axes of the trunnion shaft and the bore when the shaft is biased in a direction transverse the longitudinal axes by the impetus caused by the rearward movement of the gun when it is fired. Gotman discloses a rotary assembly including a shaft, a housing and a bearing interposed between the shaft and housing to provide concentric alignment of the shaft within the housing even though the bearing is slightly out of alignment with either the shaft of the housing, or both. Gotman, col. 2, lns.14-21. The rotary assembly that Gotman discloses to accomplish this result is different from the trunnion assembly described in claims 1-3 of the present application, and, as such, Gotman does not anticipate claims 1-3 of the present application.

Figure 1 of Gotman shows a rotary assembly including a ball bearing B of conventional construction, a shaft S which, according to conventional thinking, is too small for the ball bearing B, and a housing H which, also according to conventional thinking, is too large for the ball bearing B. Gotman, col. 3, lns. 60-67. Ball Bearing B includes an inner ring 20, an outer ring 30, and a set of balls 25 positioned between the rings 20 and 30. Thus, items "20 and 30" shown in Figure 1 are <u>not</u> cam rings, as

argued in his §102(b) rejection based on Gotman. *See* 1/8/08 Office Action, p.3. Rather, items "20 and 30" are part of ball bearing B.

Inner ring 20 has a cylindrical inner surface 21, which, in turn, has a chamfered surface 22 at one end thereof. Outer ring 30 has an cylindrical outer surface 31 which , in turn, has a chamfered surface 32 at one end thereof. An inner compensating member 35 has a circular cross-sectional diameter that is too large to fit between shaft S and inner cylindrical surface 21 of inner ring 20, but that is sufficiently small to fit between shaft S and chamfered surface 22, so as to be overlapped and engaged by chamfered surface 22 in both axial and radial directions. Gotman, col. 4, lns. 43-49. An outer compensating member 40 has a circular cross-sectional diameter that is too large to fit between the circumferential wall 11 of housing H and cylindrical surface 31 of outer ring 30, but that is sufficiently small to fit between housing H and chamfered surface 32 of outer ring 30, so as to be overlapped and engaged by chamfered surface 32 in both axial and radial directions. Gotman, col. 4, lns. 50-56.

Inner compensating member 35 receives axial support directly from a snap-ring 17 that it buts directly against. Outer compensating member 40 receives axial support from a flat circular washer 45 that is resiliently supported by a helical spring 47 whose other end is supported by an outer snap-ring 13. Thus, inner compensating member is positioned between snap-ring 17 and chamfered surface 22 of inner ring 20, while outer compensating member 40 is positioned between washer 45 and chamfered surface 31 of outer ring 30. Thus, there is no cam ring disposed between the compensating members 35 and 40 and the ball bearing B, as argued by the Examiner. *See* 1/8/08 Office Action, p.3.

As shown in Figure 6 of Gotman, inner compensating member 35 has a gap 36 at one point on its circumference. Solid lines in Figure 6 show the natural or unstressed configuration of compensating member 35. Member 35 is made of rigid material having resilient deformation capability, such as a suitable grade of spring steel, so that it can be resiliently deformed radially outwardly to a larger diameter, as indicated by the dotted lines shown in Figure 6. Gotman, col. 5, lns. 37-44. As shown in Figure 4 of Gotman, outer compensating member 40 also has a gap 41 at one point on its circumference. Here again, solid lines shown in Figure 4 show the natural or unstressed condition of compensating member 40 in which the circumferential gap is fairly large. Outer compensating member 40 is also made of the rigid material having resilient deformation capability, such as a suitable grade of spring steel, like inner compensating member 35, so that it can be resiliently deformed radially inwardly to a smaller diameter. Gotman, col. 5, lns. 49-57. Thus, inner and outer compensating members 35 and 40 are not resiliently compressible O-rings, as argued by the Examiner. *See* 1/8/08 Office Action, p.3.

Clearly, then, Gotman does not anticipate the trunnion assembly described in claims 1-3 of the present application in that it does not disclose at least a bearing assembly with realigning means including a ball bearing assembly having at least one cam ring disposed between a resiliently compressible O-ring and a ball bearing, as recited in independent claim 1 of the present application, or first and second cam rings disposed between first and second resiliently compressible O-rings and a ball bearing, as recited in dependent claim 2. Nor does Gotman disclose O-rings that are located in O-ring retainers, as recited in dependent claim 3.

Because independent claim 1 of the present application is not anticipated by either Dabrasky or Gotman, previously pending dependent claims 2-4 and new dependent claims 8-11, which depend either directly or indirectly from claim 1, are also not anticipated by these references.

In view of the foregoing, it is believed that all of the claims pending in the application, *i.e.*, claims 1-4 and 8-11, are now in condition for allowance, which action is earnestly solicited. If any issues remain in this application, the Examiner is urged to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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